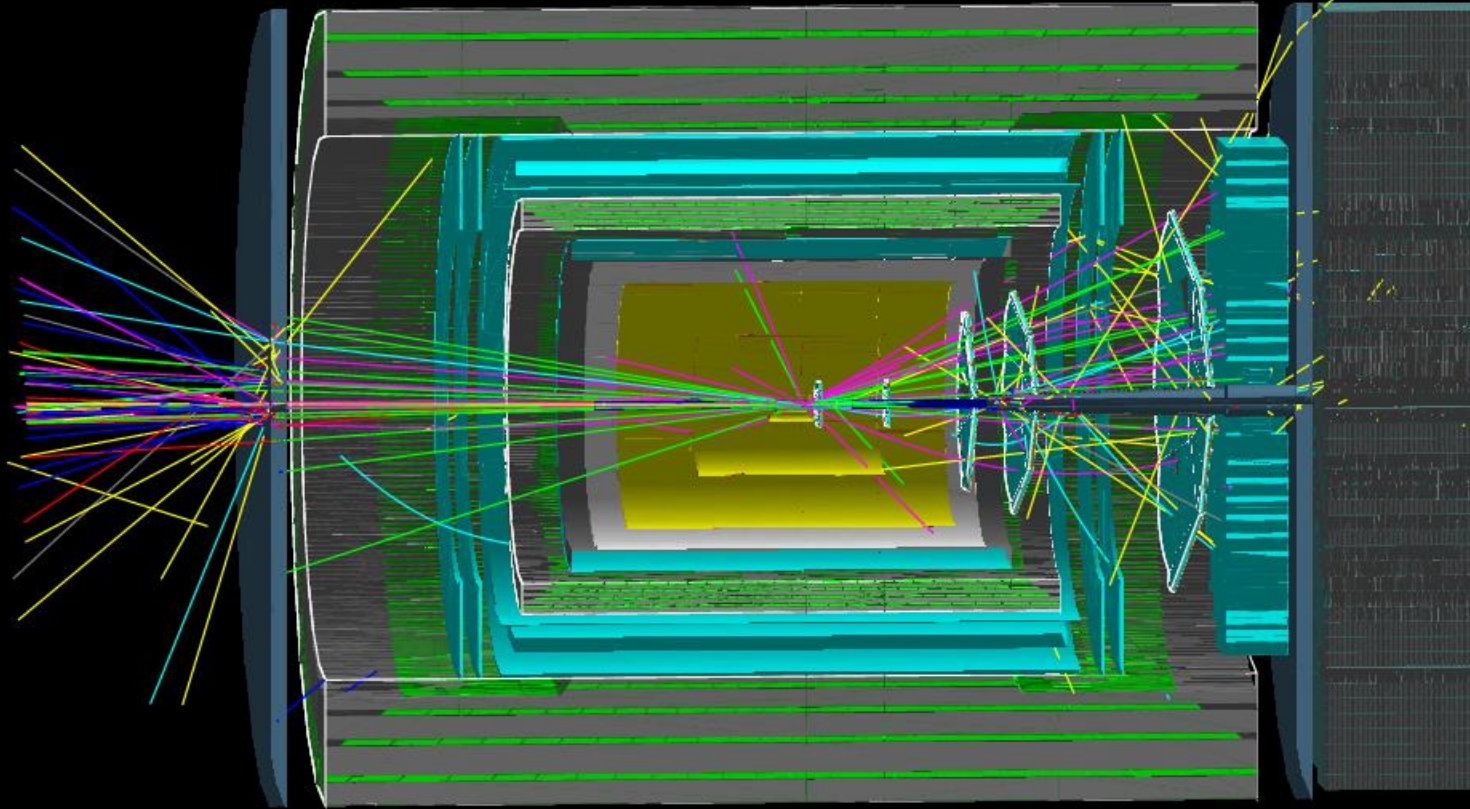


fsPHENIX ToDo list



R. Seidl
(RIKEN)

Try to prepare LOI this summer

- Current write-up outdated and invisible
- Prepare up-to-date document and submit it to arXiv with
 - Engineering
 - Full GEANT layout and drawings (ok)
 - Realistic detector performance plots (to be done)
 - Us realistic as possible physics plots for main observables outlined in RHIC CNM plan
 - Reasonable costing
 - Path forward on detector prototyping, refurbishing and construction

Engineering

- Official magnetic field including field shaper from Engineers (Walt?)
- Official forces on field shaper and plug doors and ok from engineers
- 1008 weight support for full fsPHENIX/ePHENIX

Detector performance

- Delta p/p plots
 - as a function of rapidity in slices of particle momenta
 - As a function of momentum in slices of rapidity
- updated jet resolution plots vs \rightarrow Chong
 - energy,
 - phi and
 - Eta
 - Dependence on thickness
 - Neutron catching via late readout possible?
- Underlying event study and dilutions in jets

Requires tracking \rightarrow Haiwang

\rightarrow Chong

Detector performance/physics

- Drell Yan capabilities in pp and pA
 - Heavy flavor and other background reduction plots
 - Several detail plots about
 - E/p in forward detector,
 - Conversions in beampipe
 - Jet veto in fHCAL

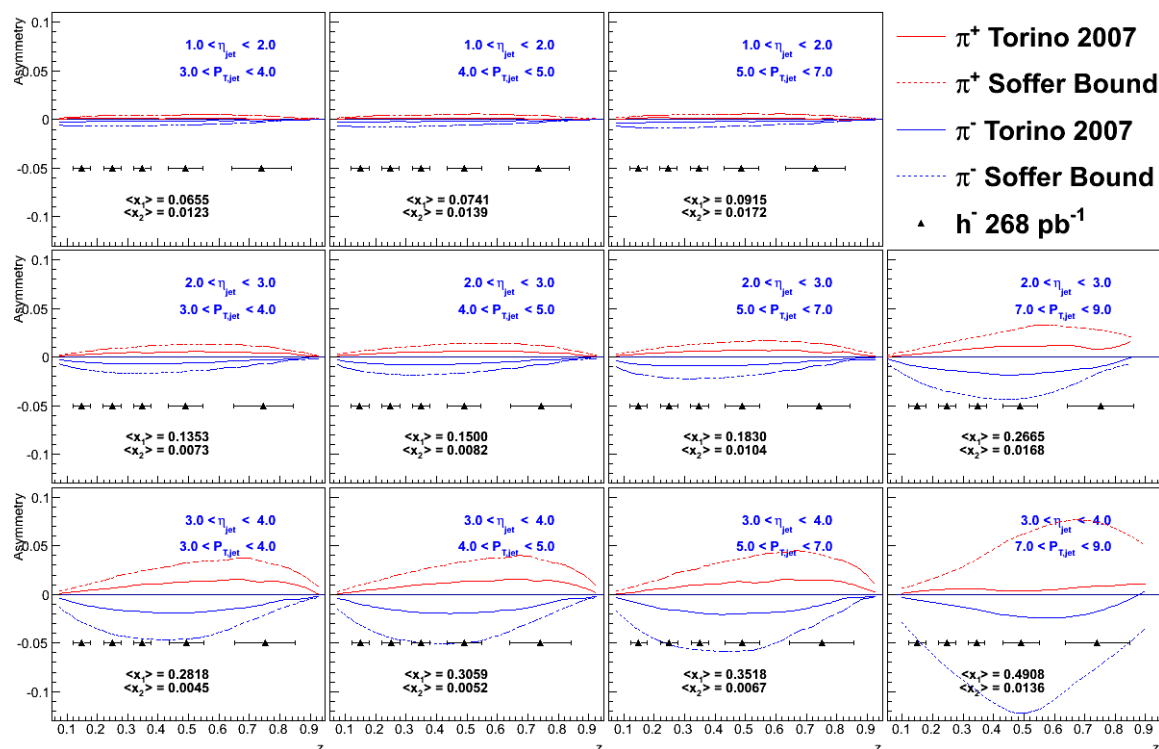
Detector performance/physics

- Hadron in jet z and ϕ /kt resolutions

- As function of jet energy and rapidity

→ redo forward Collins plots

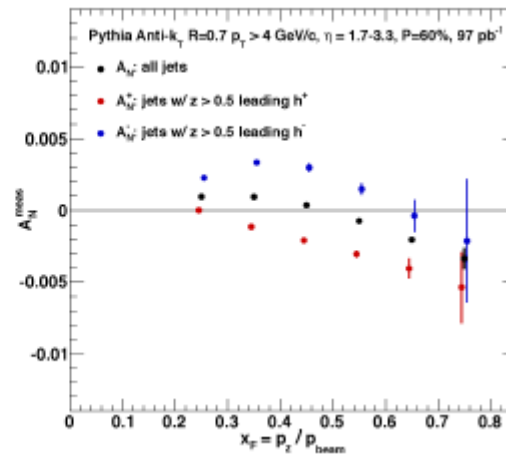
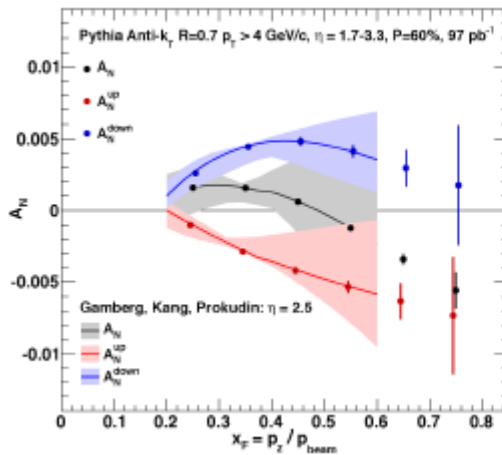
→ RCS



Physics plots

- Redo flavor enhanced jet AN plots
 - Get flavor information from Pythia
 - ... and hadron information (smeared)

→ RCS



Other work

- EMCAL and HCAL prototype test beams maybe together with STAR and sPHENIX at FNAL or Run17?
 - Refurbishing PHENIX EmCal in summer (ACU student help?)
- Pythia 8 tuning for RHIC energies
- Studies on high luminosity operations in fsPHENIX
 - Multiple vertices, pile-up in detectors, timing structure, triggering
- What about roman pots? PID?